

Veterinary technicians contribute to shared decision-making during companion animal veterinary appointments

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OBJECTIVE

To describe and compare veterinary professionals' use of shared decision-making during companion animal appointments.

DESIGN

Multi-practice cross-sectional study.

SAMPLE

A purposive sample of 4 companion animal veterinary clinics in a group practice in Texas.

PROCEDURES

A convenience sample of veterinary appointments were recorded January to March 2018 and audio-recordings were analyzed using the Observer OPTION⁵ instrument to assess shared decision-making. Each decision was categorized by veterinary professional involvement.

RESULTS

A total of 76/85 (89%) appointments included at least 1 decision between the client and veterinary professional(s), with a total of 129 shared decisions. Decisions that involved both a veterinary technician and veterinarian scored significantly higher for elements of shared decision-making (OPTION⁵ = 29.5 ± 8.4; n = 46), than veterinarian-only decisions (OPTION⁵ = 25.4 ± 11.50; *P* = .040; n = 63), and veterinary technician-only decisions (OPTION⁵ = 22.5 ± 7.15; *P* = .001; n = 20). Specific elements of shared decision-making that differed significantly based on veterinary professional involvement included educating the client about options (OPTION⁵ Item 3; *P* = .0041) and integrating the client's preference (OPTION⁵ Item 5; *P* = .0010).

CLINICAL RELEVANCE

Findings suggest that clients are more involved in decision making related to their pet's health care when both the veterinary technician and veterinarian communicate with the client. Veterinary technicians' communication significantly enhanced client engagement in decision-making when working collaboratively with the veterinarian.

Shared decision-making (SDM) is a communication process in which healthcare professionals and their patients or clients collaborate to make healthcare choices. Elwyn et al¹ developed a 3-talk model of shared decision-making that includes 'team talk,' 'option talk,' and 'decision talk.' First, 'team talk' highlights the need to consider various options and offers partnership to support the patient or client in the decision-making process.¹ Second, 'option talk' informs the patient or client about the available options, including risks and benefits. Finally, 'decision talk' incorporates the patient's or client's views, opinions, and concerns to make or defer the decision.¹ The 3-talk model was used to develop a 5-item instrument (OPTION⁵) to enable observers to measure shared decision-making based on provider-patient/client healthcare interactions.²

Shared decision-making can be measured from various perspectives, including patient/client, healthcare provider, and observer. A systematic review of SDM and patient outcomes found that regardless of perspective measured, SDM is most commonly associated with outcomes related to patient knowledge, attitudes, or emotions, followed by behavioral and health outcomes.³ For instance, SDM has been found to be associated with increased patient satisfaction,^{4,5} as well as patient knowledge⁶ and reduced decisional conflict.⁶ Use of SDM by healthcare professionals was also found to result in improved adherence, and greater non-adherence when patients' perceived a lack of SDM.^{7,8} Finally, evidence suggests SDM is positively associated with patient-reported health outcomes,⁹ in addition to symptom resolution and improvement in overall medical conditions.¹⁰

While most available literature investigating SDM is conducted in the context of human medicine, there is increased recognition of SDM among scholars in the veterinary field.¹¹ Descriptive analyses indicate that veterinarians' use of SDM is highly variable. One study¹² conducted in Canada revealed mean OPTION⁵ scores of 22.6 out of 100 during veterinarian-client interactions in companion animal appointments. By contrast, a study of companion animal appointments conducted in the UK found a mean OPTION⁵ score of 50.5 out of 100.¹³ Veterinarians' use of SDM was found to have a positive association with appointment length, and a negative association with veterinarians' years in practice.¹² One study¹³ found that SDM was positively correlated with client visit satisfaction. To date, the veterinary literature has primarily focused on shared decision-making between the veterinarian and client, though other veterinary professionals such as veterinary technicians (VTs) play an integral role in client communication.

In human medicine, nurses and physicians work collaboratively to attend to patient care.^{14,15} Nurses communicate directly and develop relationships with patients, exchange information, and facilitate SDM in care management.¹⁶ In veterinary medicine, the role of the veterinary technician parallels that of nurses in human medicine. Within appointments, VTs commonly initiate client communication by collecting and recording the client's agenda and patient's medical history.¹⁷ Dependent upon the level of VT utilization by practices, VTs may be responsible for client education, reviewing treatment options, presenting treatment plans, facilitating cost discussions, and teaching clients how to administer treatments for their pets.

The objectives of the present study were to: 1) describe the extent of shared decision-making utilized by veterinary technicians and veterinarians alone, and the combined effect of veterinary technicians and veterinarians involved in the same decision; 2) compare the level of shared decision-making based on veterinary technicians' and veterinarians' involvement in the decision.

Materials and Methods

Study design

This study is part of a larger multi-part study of the impact of a 15-month communication skills training intervention conducted at 4 multi-doctor companion animal veterinary practices within a group practice surrounding Austin, Texas, between April 2018 and June 2019.¹⁸ Only pre-test data was analyzed in the present study, including demographic survey data and video recordings collected 3 months before the intervention period. The Human Subjects Research Committee of the Colorado State University Research Integrity and Compliance Review Office and the University of Guelph Research Ethics Board approved the research protocol.

Participant recruitment

Recruitment was previously described.¹⁸ In brief, 4 practices operated by a single practice group known to one of the authors (JRS) were enrolled in the study. Vet-

erinarians and veterinary teams were recruited at the level of the 4 practices and all veterinarians and veterinary team members employed were invited to participate in the study. Veterinarians and veterinary team members provided online consent at the start of the study. A target convenience sample of 16 clients per veterinarian, were recruited to video-record their appointments, though only audio content was utilized in the current study. Written in-person informed consent for video recording was obtained from client participants when they arrived for their appointment by an assigned veterinary team member trained to obtain informed consent.

Video-recorded appointments

The present study data is a subset of pre-intervention appointments (n = 85) from a larger dataset.¹⁸ The video-recorded appointments of 9 veterinarians who participated in the communication training intervention study were included.¹⁸ Three veterinarians who did not complete the full study were excluded. The 19 veterinary technicians present during the pre-intervention data-collection were included in the present study.

Veterinary Technicians' role during appointments

Veterinary technicians were responsible for initiating the appointment, eliciting the client's agenda, gathering history from the client, and performing an initial patient assessment. Upon entering the examination room, veterinarians summarized the client's agenda and history gathered back to the client to clarify and confirm that the information transfer was accurate. Together, veterinarians and/or VTs presented diagnostic and treatment options, provided treatment or care plans and associated estimates for services and procedures, and obtained informed consent from clients. Veterinary technicians remained in the examination room to assist the veterinarian during the entire appointment. In general, veterinarians handled discussions of more complex topics, while VTs conducted preventive care and routine conversations during appointments.

Demographic data

Demographic data for the present study was collected using an online survey completed during the pre-intervention data collection period.

Practices—Included type and location of practice, number of veterinarians, and number of veterinary team members employed.

Veterinarians—Incorporated gender, age, job title, years in current position, and years since graduation from veterinary school.

Veterinary technicians—Encompassed gender, age, job title, years in current position, and years in profession.

Clients—Comprised gender, age, highest level of education achieved, household income, number of veterinary visits per year, and length of veterinarian-client relationship (years). If more than one client was present for a single appointment, demographic variables were only collected for the client who completed the survey.

Pets—Clients reported pet's age, species, and sex.

Appointments—Identified as preventative care or health problem visit, categorized by the veterinarian.

Decision identification

Only preference-sensitive decisions were considered for inclusion in the current study. The coders relied on verbal cues from the interactions to interpret which decisions could be analyzed as preference-sensitive decisions. While equipoise (ie, circumstances in which options should be considered¹⁹) was not always verbalized, decisions identified to be scored using the OPTION⁵ instrument had to meet specific criteria. These criteria included that (1) more than one diagnostic, treatment, or management option was available, including the choice to “wait and see,” and (2) the client’s values, beliefs, or preferences were given consideration in evaluating risks and benefits of the options.

Each decision was categorized based on which member of the veterinary team was involved in the decision-making process with the client (ie, technician only, veterinarian only, veterinary technician and veterinarian). Technician-only decisions were those made between the veterinary technician and the client, while veterinarian-only decisions were made between the veterinarian and the client. Veterinary technician and veterinarian decisions were those in which both the technician and veterinarian contributed to elements of the decision-making process. The clinical context of each decision was captured by classifying decisions into the following categories: behavior, dentistry, diagnostic (screening or testing), nutrition/supplements, parasite prevention, surgery, treatment, vaccination, or other.

Observer OPTION⁵ instrument

The 5-item Observer OPTION⁵ instrument was developed from the 12-item Observer OPTION¹² instrument, both of which have been used extensively to assess shared decision-making (SDM) in human healthcare.^{20,21} The OPTION⁵ instrument was selected based on reduced coder burden without sacrificing reliability and validity. The 5-item Observer OPTION⁵ instrument has demonstrated concurrent validity with the original, validated 12-item instrument, good rater accuracy across encounters (intraclass correlation coefficient [ICC] = 0.66), and discriminant validity.²² The OPTION⁵ manual was previously adapted for veterinary medicine by replacing “clinician” with “veterinarian” or “veterinary technician”, and “patient” with “client.”¹² Additional examples were appended to the OPTION⁵ manual to illustrate cases from veterinary medicine. This modified manual was used in the current study to assess the extent of SDM that occurred during each visit.

The OPTION⁵ scale consists of 5 items to evaluate SDM behaviors used by veterinary professionals to engage clients in decision-making.²² Item 1, “justification for deliberation”, assesses the identification of a problem for which alternate options exist and justification for why options should be considered. Item 2, “supporting deliberation”, measures the extent of veterinary professional support for the client to deliberate options. Item 3, “educating about options” rates the amount of information about options that the veterinary professional provides to the client, including

pros and cons. Item 4 “eliciting preference”, examines how the veterinary professional elicits the client’s preferences, concerns, and beliefs about the options presented. Item 5, “integrating preference”, evaluates the veterinary professionals’ attempts to integrate the client’s preferences during decision-making.

Once a preference-sensitive decision was identified, the coder listened to the audio-recording for verbal cues corresponding to the 5-item OPTION⁵ instrument. In the case that more than one client was involved in the decision-making process, all client statements were treated as a single unit. The coder rated each item on a scale from 0 to 4, with a score of 0 indicating no effort (ie, behavior was not identified) and a score of 4 indicating exemplary implementation. The item scores were summed for a total out of 20. The overall score was scaled to 100, by multiplying by 5, allowing for comparison to previous studies using the OPTION⁵ and OPTION¹² instruments.

Observer OPTION⁵ coding

Coder training included 2 steps: online training followed by practice coding of a pilot dataset. The OPTION⁵ manual and online coder training (www.glynelwyn.com/observer-option-instrument.html) were used for the primary coder to gain familiarity with the instrument. After completing the online training, the primary coder analyzed an additional 30 recorded veterinarian-client interactions taken from a separate study. The principal author (NJ), with extensive experience using the OPTION⁵ instrument in the context of veterinary medicine, also coded these 30 interactions. During the coding of the 30 interactions, after 5 successive interactions, the coders met to assess agreement and discuss their scores in relation to the manual.

After completion of this training, the study dataset was coded by the primary coder, and 14 appointments (11%; 14/85) (22 decisions [17%; 22/129]) were analyzed independently by the principal author (NJ) to assess inter-rater reliability. Throughout the coding process, double-coded visits were compared for agreement visually to capture “coder drift”²³ and disagreements were discussed in alignment with the OPTION⁵ manual.

Statistical analysis

Descriptive statistics were calculated for client and veterinarian demographic variables and OPTION⁵ scores, including mean, median, SD, minimum, and maximum for continuous variables, and frequency for categorical variables. Denominators of demographic variables vary based on missing items as surveys did not require a forced response. The Shapiro-Wilk test was used to assess normality of continuous variables. The Kruskal-Wallis test, which is a non-parametric test used to assess differences among 3 or more independent groups,²⁴ was used to compare OPTION⁵ scores stratified by who was involved in the decision (ie, VT only, veterinarian only, and both the VT and veterinarian). If the Kruskal-Wallis test was significant, then 3 two-way comparisons were conducted using the Mann-Whitney U test, which is a non-parametric test

used to identify differences between 2 independent groups.²⁵ The 2-way comparisons were conducted to identify specific OPTION⁵ scores that differed based on professional involvement (ie, VT compared to veterinarian, VT compared to both the VT and veterinarian, and veterinarian compared to both the VT and veterinarian). All decisions were treated independently for the 3-way and 2-way comparisons. *P*-values were estimated with Monte-Carlo simulation using 100,000 samples. Percent agreement was calculated for coders' selection of decisions to be scored (ie, did both coders identify the same preference-sensitive decisions) and ICC (2,1)²⁶ was calculated to evaluate inter-rater reliability of OPTION⁵ scores. All statistics were conducted using standard statistical software (SAS OnDemand for Academics; SAS Institute Inc) and a significance level of *P* < .05 was used.

Results

Participant demographic data

Of the 9 veterinarians included in this study, most were women (78%; 7/9) while 22% were men (2/9) and a mean age of 35.8 ± 4.29 (median, 35; range, 31 to 44). At the start of the study, 5 veterinarians were associate veterinarians, 3 were medical directors, and 1 was a practice owner/partner. Veterinarians were in their current position for a median of 1 year (mean, 2.90 ± 3.29; range, 0.2 to 10) and in the veterinary profession for a mean of 11 years ± 4.57 (median, 11; range, 3.8 to 19).

Nineteen veterinary technicians were present during the pre-intervention data collection across the 4 veterinary practices. The majority of VTs were women (84%; 16/19) and 16% (3/19) were men, with a mean age of 33.4 ± 7.53 years (median, 32.0; range, 24 to 51). Participating VTs had been in their current position for a median of 1 year (mean, 2.94 ± 4.69; range, 0 to 20) and in the veterinary profession for a median of 6 years (mean, 9.95 ± 8.18; range, 2 to 28).

In total, 85 clients participated in the study with a mean age of 44 ± 14.3 years (median, 42.0; range,

20 to 80; n = 76), had known their veterinarians for a mean of 1.7 ± 2.74 years (median, 1.0; range, 0 to 14; n = 76), and visited their veterinarian 3.7 ± 3.9 times per year on average (median, 3.0; range, 1 to 25; n = 77). Most clients were women (71%; 52/73), while 21 (29%) were men. Eleven clients (15%) had an annual household income of less than \$49,999 (USD), 19 (26%) clients had a household income of \$50,000 to \$99,999, and most clients (59%; 43/73) had a household income of over \$100,000. Eight clients (10%; 8/76) obtained a high school diploma, 6 (8%) had an associate degree, 12 (16%) had some college education, 34 (45%) obtained a bachelor's degree, 13 (17%) had a graduate degree, and 3 (4%) had a professional degree. Most pets were dogs (86%; 66/77), followed by cats (14%; 11/77) with a mean age of 5.7 ± 4.7 (median, 4.0; range, < 1 to 19; n = 78). Approximately half of the pets were female (51%; 40/78), while the remainder were male (49%; 38/78).

The mean visit length was 37.4 ± 13.3 fractional minutes (median, 35.2; range, 9.2 to 67.8). Approximately half of appointments were preventative care (45/85; 53%) and the remainder were health problem appointments (40/85; 47%) as categorized by the veterinarian.

OPTION⁵ scores

Out of the 85 appointments included, 76 (89%) included at least one preference-sensitive decision that could be scored using the Observer OPTION⁵ instrument. There was an average of 1.7 preference-sensitive decisions made per appointment (range, 1 to 5), with a total of 129 decisions. Decisions that involved both a VT and veterinarian demonstrated the highest mean OPTION⁵ score (29.5 ± 8.4; n = 46) and scored significantly greater than decisions involving a veterinarian-only (25.4 ± 11.50; *P* = .040; n = 63) or a VT-only (22.5 ± 7.15; *P* = .001; n = 20). No significant difference was found in OPTION⁵ scores of decisions involving a VT only compared to a veterinarian only (*P* = .44). Overall OPTION⁵ total and item scores, stratified based on veterinary professional involvement are presented (**Table 1**).

Table 1—Descriptive statistics (Mean, SD, Median, Min, Max) of OPTION⁵ scores stratified by who was involved in the decision-making process with the client and results from Kruskal-Wallis tests used to identify differences in OPTION⁵ scores based on team member involvement in decision-making. Results represent pre-intervention decisions only (n = 129).

	Veterinary Technician (n = 20)			Veterinarian (n = 63)			Veterinary Technician and Veterinarian (n = 46)			Kruskal-Wallis test <i>P</i> -value
	Mean (SD)	Median	Min-Max	Mean (SD)	Median	Min-Max	Mean (SD)	Median	Min-Max	
Overall score (/100)	22.5 (7.15) ^a	25.0	5.0–35.0	25.4 (11.50) ^a	25.0	5.0–55.0	29.5 (8.4)	30.0	15.0–55.0	.0114
Item 1 (/20)	1.00 (2.60)	0	0–10.0	0.80 (2.55)	0	0–15.0	0.45 (1.75)	0	0–10.0	.4739
Item 2 (/20)	5.00 (3.60)	5.0	0–10.0	5.55 (3.25)	5.0	0–10.0	5.75 (2.95)	5.0	0–10.0	.7183
Item 3 (/20)	7.50 (2.55) ^a	7.5	5.0–10.0	8.75 (2.70)	10.0	0–15.0	9.80 (2.55)	10.0	5.0–15.0	.0041
Item 4 (/20)	5.50 (2.75)	5.0	0–10.0	5.10 (3.95)	5.0	0–10.0	5.55 (2.85)	5.0	0–10.0	.8077
Item 5 (/20)	3.50 (3.30) ^a	5.0	0–10.0	1.05 (1.01) ^a	5.0	0–15.0	7.95 (4.80)	7.5	0–20.0	.0010

^aSignificantly different from decisions involving both the veterinary technician and veterinarian for the same item or overall score based on the Mann-Whitney U test (*P* < .05).

Agreement between independent coders for the identification of preference-sensitive decisions was 84.5% (n = 14 appointments), and ICC was 0.91 indicating excellent inter-rater reliability of OPTION⁵ scores (n = 22 decisions).

Two OPTION⁵ items differed significantly based on veterinary professional involvement; items 3 (educating about options; $P = .0041$) and 5 (integrating preference; $P = .0010$). Item 3 scores for decisions involving both a VT and veterinarian ranked significantly higher than decisions involving a VT only ($P = .0025$). Item 3 scores did not differ significantly between decisions involving a VT only (score = 7.50, n = 20) compared to a veterinarian only (score = 8.75, n = 63; $P = .066$) or decisions involving a veterinarian only compared to both a VT and veterinarian (score = 9.80, n = 46; $P = .054$). Item 5 scores for decisions involving both a VT and veterinarian (score = 7.95, n = 46) ranked significantly higher than decisions involving a veterinarian only ($P = .0075$) or a VT only ($P = .0003$). Though no significant difference was found in item 5 scores between decisions involving a VT only (score = 3.50, n = 20) compared to a veterinarian only (score = 1.05, n = 63; $P = .2367$). **Table 2** displays the types of decisions scored, stratified by veterinary professional involvement.

Table 2—A categorization of the types of decisions scored using the OPTION⁵ instrument, stratified by veterinary professional involvement (n = 129).

Decision type	Veterinary Technician	Veterinarian	Veterinary Technician and Veterinarian
Behavior	0	1	0
Dentistry	0	5	0
Diagnostic (screening or testing)	6	16	18
Nutrition/supplements	1	4	1
Parasite prevention	3	5	7
Surgery	0	1	0
Treatment	0	28	14
Vaccination	4	3	4
Other ^a	6	0	2
Total	20	63	46

^aThe decisions categorized as “other” included a discussion of multiple preventive medicine topics that were combined into a single decision.

Discussion

The present study described and compared the level of shared decision-making in companion animal practice based on the veterinary professional(s) (ie, veterinarian and/or veterinary technician) involved in the decision-making process. Findings suggest that VTs contribute to the process of shared decision-making during companion animal appointments, leading to greater client engagement. Participating veterinary technicians supported client decision-making alongside the veterinarian in over a third of decisions made, resulting in significantly higher levels of shared decision-making compared to

decisions made between the client and veterinarian or client and VT alone.

There is evidence that VTs are under-utilized in veterinary practices. One in 5 VTs reported not being given sufficient agency to address clients’ needs.²⁷ Preliminary findings from a survey of VTs found that more than half of VTs reported sometimes or frequently not being asked to perform tasks that they were qualified to do and close to two-thirds of VTs shared being sometimes or frequently asked to perform tasks that a less qualified person could do.²⁸ Veterinary practices, clients, and patients are likely to benefit from utilizing credentialed VTs more, fostering shared-decision making with clients.

These findings suggest participating veterinary technicians supported greater integration of client’s preferences (item 5) during veterinarian-client interactions than veterinarians did unaccompanied. Item 5 of the OPTION⁵ instrument examines the implementation of plans tailored to the client’s beliefs, values, and preferences by reviewing the decision that was made, contracting for next steps, checking in with the client regarding the plan, and addressing final concerns.² VTs’ participation in client-communication in the full appointment appeared to elevate the integration of client preferences. Veterinary technicians in the study practices were responsible for eliciting the client’s full agenda and their presence during veterinarian-client dialogue of client beliefs, values, or preferences presumably enabled them to further incorporate client preferences into a management or treatment plan.

In the present study, 20 out of the 129 shared decisions involved only the VT and client, independent of the veterinarian involved in the appointment. Research demonstrates a growing shift toward providing VTs with greater clinical autonomy, as veterinary technician-only appointments are scheduled in 68% of veterinary clinics.²⁹ Further, increases in the ratio of VTs to veterinarians exhibits a positive impact on practice revenue.^{30,31} Veterinary technicians’ sense of self-sufficiency in the workplace is positively associated with work engagement^{32,33} and there is a strong positive association between utilization of VTs and retention.²⁸ Using VT’s skills and knowledge is associated with reduced cynicism and increased personal efficacy.³⁴ On the other hand, veterinary technicians report lower job satisfaction scores than most other veterinary team members,³⁵ are at high risk of burnout,³⁴ and experience significantly higher rates of suicide compared to the general US population.³⁶ Practices can mitigate VT burnout by providing opportunities to participate in professional development programs, such as communications training, and increasing the recognition of VTs’ contribution to the veterinary team.³⁴ Fully integrating VT’s knowledge and skills, including their independent involvement in decision making with clients that is within their scope of practice, may improve VTs career satisfaction, wellbeing, and long-term retention.

The mean score for educating clients about options (item 3) was significantly lower when decisions were made independently with the VT compared to

decisions made in collaboration with both veterinary professionals, highlighting an area of development for VTs. Most VTs spend more than half of their working hours interacting with clients,³⁷ which is a component of their work found to be positively correlated with VTs' job satisfaction.²⁸ Consistent with present findings of VTs' active involvement in implementing management or treatment plans with clients, VTs have previously reported feeling most comfortable and empowered to educate clients about medication administration.²⁹ Practices can provide opportunities to assist VTs' communication skill development, particularly supporting their discussion of topics in which they feel the least comfortable and empowered to discuss. Based on previous research these topics include nutrition, hospice care, and diabetes.²⁹

Regardless of veterinary professional involvement, justification for deliberation (item 1) was the lowest scoring item in relation to SDM in the present study. The acknowledgment or justification of choice is frequently the least prevalent communication behavior observed during the process of shared decision-making.^{12,38} While this is an area of growth for most health professionals, it may be particularly important when VTs and veterinarians are working collaboratively. For example, if a preference-sensitive decision initiated between a client and VT is thought to be a decision that is best managed in collaboration with the veterinarian, then VTs can signpost the decision. This can be done by informing clients that various choices exist in relation to their animal's veterinary care and by justifying the presence of options.³⁹ This could be followed by an acknowledgment that the client will be further supported in this decision-making process when the veterinarian joins the appointment.

The level of shared decision-making identified in the present study is greater compared to findings from studies previously conducted in the Canadian veterinary setting. Veterinarians in the current study exhibited a mean OPTION⁵ score of 25.4 out of 100, which is marginally higher than the mean OPTION⁵ score in a previous study of 22.6,¹² based on analysis of 717 veterinarian-client companion animal appointments in Canada.¹² Moreover, including VTs' contributions to shared decisions in the present study demonstrated a significantly higher mean OPTION⁵ score of 29.5, highlighting the opportunity of collaboration between veterinarians and VTs during appointments. One primary difference in study design between the previous Canadian study and the present study was the use of the preference-sensitive decision that demonstrated the greatest level of client-involvement,¹² versus the use of a mean OPTION⁵ score of all preference-sensitive decisions within each appointment respectively. It is likely that the veterinarians and VTs participating in the present study promoted even greater client involvement for some preference-sensitive decisions than is represented by their mean OPTION⁵ score. The current study was conducted in veterinary practices owned by a single practice group that prides themselves on incorporating a team-based approach to veterinary

care. Further research into the value and outcomes of team-based veterinary healthcare may be of benefit to the veterinary profession.

Although the Observer OPTION⁵ instrument has been used extensively and exhibits strong psychometric properties,^{21,22,40,41} some limitations warrant consideration. First, justification for deliberation was rarely verbalized, therefore, coders identified preference-sensitive decisions through other aspects of the SDM process. Even so, inter-rater agreement for decision selection was very good. Second, due to the nature of point-in-time data collection, decisions that spanned over multiple appointments were not captured beyond what was communicated during the single interaction included in the study. Nevertheless, OPTION⁵ scoring incorporates the dialogue related to deferring a decision to another point in time. Finally, organizations have unique and distinct cultures, often as a result of shared values and behavioral norms.⁴² Given all participating practices were owned by a single practice group, extrapolation of results needs to be done with caution. Utilization of VTs in these 4 companion practices may vary from other general veterinary practices, as practices in the present study incorporated VTs in the full veterinary appointment.

The practical implications of these findings are widespread. When both the veterinarian and VT contributed to the decision-making process, considerable improvements in SDM, as measured by OPTION⁵ scores, occurred. Though communication skills education is a standard for accreditation in AVMA-accredited veterinary technician programs,⁴³ these results accentuate an opportunity for the profession to provide ongoing support for VTs' communication skill development during training and in practice via continuing education opportunities. Veterinary organizations, such as the National Association of Veterinary Technicians in America (www.navta.net) are designing programs and campaigns to enhance the role of veterinary technicians in practice. The profession would benefit from continued efforts at all levels of the veterinary profession to support the role of VTs through advocacy and professional development.

Alongside these initiatives, there is an ongoing need for more research examining the use of VTs within the examination room and during client interactions and the effect on outcomes, such as veterinary professional wellbeing, job satisfaction, retention, and practice financial metrics. In addition, evidence of the impact of SDM on outcomes, such as adherence or patient health, is needed to provide insight into the implication that the present study findings have on clinical outcomes in veterinary medicine. Overall, this study supports the utilization of VTs in the examination room and provides evidence of their substantial contribution to client communication to promote shared decision-making and ultimately client engagement in veterinary care.

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